Published in final edited form as:
Community Ment Health J. 2015 February ; 51(2): 239–248. doi:10.1007/s10597-014-9785-9.

Collectivistic orientation, acculturative stress, cultural self-efficacy, and depression: A longitudinal study among Chinese internal migrants

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Abstract

The current study examined the longitudinal relationship of collectivistic orientation and depression and the mediating effects of acculturative stress and cultural self-efficacy between collectivistic orientation and depression. We expect that collectivistic orientation would decrease acculturative stress and increase cultural self-efficacy, and in turn, improve depression. Using data from 641 Chinese internal migrants during a one-year period, the results supported the hypothesis that collectivistic orientation predicted decreased depression. Moreover, collectivistic orientation alleviated depression through reducing acculturative stress. Although cultural self-efficacy was also a significant mediator, collectivistic orientation relieved depression through decreasing cultural self-efficacy. Implications for future research directions and counseling are discussed.

Keywords

collectivistic orientation; depression; acculturative stress; cultural self-efficacy; China; internal migrants

Introduction

Migration is the process of changing the location of residence and has commonly happened in modern times (Bhugra, 2004). People may receive benefit from migration (e.g., better employment, better health care), but they may also encounter migration stressors (e.g., loss of interpersonal ties, language barriers, discrimination) and suffer mental health problems (Berry & Kim, 1988; Du & Li, 2013; Du, Li, & Lin, 2014; Rogler, Cortes, & Malgady, 1991). Previous research has consistently found that migration was associated with more depressive symptoms (Chou, 2009; Silove, Sinnerbrink, Field, Manicavasagar, & Steel, 1997; Silveira & Allebeck, 2001; Vega, Kolody, & Valle, 1987). In China, there were over 279 million rural-to-urban migrants in 2012 (National Bureau of Statistics of China, 2013). Recent findings have raised concerns about mental health status among Chinese rural-to-

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urban migrants (Du, Li, Lin, & Tam, 2014; Wang, Li, Stanton, & Fang, 2010); however, it is still unclear what factors might protect rural-to-urban migrants from developing depressive symptoms.

To facilitate improvement of depression, researchers have identified some protective factors against depression: cognitive factors (e.g., self-complexity, positive thinking) (Lightsey, 1994; Linville, 1987), personality traits (e.g., self-esteem, resilience) (Dumont & Provost, 1999; Taylor & Brown, 1988), social factors (e.g., family, social and ethnic support) (Noh & Kaspar, 2003; Silveira & Allebeck, 2001; Valencia-Garcia, Simoni, Alegría, & Takeuchi, 2012), and cultural factors (e.g., cultural values) (Umaña-Taylor & Updegraff, 2007). Increased knowledge regarding protective factors against depression could lead the therapy process and promote mental health with migrants.

The current study focused on Chinese internal migrants to examine collectivistic orientation as a protective factor against depression as well as to identify the mediators in the relationship between collectivistic orientation and depression. There were two reasons for studying Chinese internal migrants. First, the number of this population is very large (i.e., 279 million in 2012) and has increased 93.23% since 2000, which poses a major challenge for health care organizations (National Bureau of Statistics of China, 2013). Second, most of Chinese internal migrants were rural-to-urban migrants who have had poorer mental health compared with urban counterpart (L. Li et al., 2007; X. Li, Stanton, Fang, & Lin, 2006; Wong, He, Leung, Lau, & Chang, 2008). Therefore, it is important to focus on Chinese internal migrants to identify potential protective factors against depression and to understand the mechanisms through which the factors reduce depression. However, research on Chinese internal migrants is limited. Thus far, no research has directly examined the association between collectivistic orientation and depression within Chinese internal migrants. The current study explored these questions.

Cultural Orientation and Depression

Cultural values have been argued to be a psychological buffer (Greenberg, Solomon, & Pyszczynski, 1997). Cultural worldviews provide a set of values and normative standards. People living up to cultural worldviews can maintain a sense of self-worth by which they are able to reduce the existential anxiety and depression (Simon, Harmon-Jones, Greenberg, Solomon, & Pyszczynski, 1996). A disruption in one's anxiety-buffering mechanisms such as cultural worldviews may result in stress disorder and depression (Pyszczynski & Kesebir, 2011). Cultural orientation is an outstanding aspect of one's cultural worldviews. A marked distinction across cultures is between collectivistic and individualistic orientation. East Asians (e.g., Chinese, Japanese) tend to hold collectivistic orientation and believe that groups bind and mutually obligate individuals, whereas Westerners (e.g., North Americans) tend to embrace individualistic orientation and consider that individuals are independent of one another (Oyserman, Coon, & Kemmelmeier, 2002). To be beneficial for mental health, an individual should adhere to one's own cultural values (Fulmer et al., 2010). Therefore, we hypothesized that for Chinese internal migrants, collectivistic orientation would be a protective factor against depressive symptoms.

Empirical research on the relationship between collectivistic orientation and depression revealed inconsistent findings. Several studies reported that among European, African, and Asian Americans, depression was positively associated with collectivistic orientation but negatively associated with individualistic orientation (Harris & Molock, 2000; Okazaki, 1997, 2000; see also Oyserman, et al., 2002 for a review). Harris and Molock (2000) suggested that a positive association between collectivism and depression in individualistic culture may reflect that individuals with a strong group orientation are hard to find social support so that collectivistic orientation may aggregate the level of stress and depression. When individuals hold a contrasting belief (i.e., collectivistic orientation) in an individualistic culture, the belief may impair rather than improve mental health. However, in collectivistic cultures, collectivistic orientation is in line with cultural values so that it may serve as a protective factor relative to individualistic orientation. The study of Moscardino et al. (2010) corroborates this idea. They found that in Russia, a relatively collectivistic culture (Chirkov, Ryan, Kim, & Kaplan, 2003), collectivism was reported associated with decreased depression among survivors of terrorist attack.

Acculturative Stress, Collectivistic Orientation, and Depression

Migrants commonly experience acculturative stress during the acculturation process (Berry, 1997; Rudmin, 2009). Acculturative stress is defined as the psychological, somatic, and social difficulties in adapting to a new culture, which is mostly experienced when the acculturating individual and the new context cannot fit (Berry, 2006). When people's own values are consistent with culture values, they are more likely to have a better mental health (Caldwell-Harris & Ayçiçegi, 2006). Hence, the consistency between personal and cultural beliefs may reduce acculturative stress. Chinese culture embraces collectivism and Chinese people are interdependent and relational (Du et al., 2013; Du, King, & Chi, 2012; Oyserman, et al., 2002). After migration, Chinese internal migrants are still living in a highly collectivistic culture. Therefore, we hypothesized that Chinese internal migrants with a high collectivistic orientation will report a low level of acculturative stress.

The relationship between acculturative stress and depression has been well documented in acculturation literature (Anderson, 1991; Berry, 1997; Rudmin, 2009). During the adaptation, if migrants have to face the changes in a new culture exceeding their capacity to cope, they may show incapacitating anxiety and depressive symptoms (Berry & Kim, 1988). Empirical studies have shown that depression is positively associated with acculturative stress among Asian Americans (Lee, Koeske, & Sales, 2004; Mui & Kang, 2006; Oh, Koeske, & Sales, 2002; Wei et al., 2007), Latino Americans (Hovey, 2000; Hovey & King, 1996; Torres, 2010), and African Americans (Constantine, Okazaki, & Utsey, 2004). A positive association between acculturative stress and depression was also found among Chinese migrant workers (Wong, et al., 2008). Wong et al.'s study (2008) examined the prevalence and correlates of mental health in migrant workers in Shanghai, China. They found that acculturative stress was significantly associated with several indicators of mental health, including depression, phobic anxiety, hostility, interpersonal sensitivity, and obsession and compulsion.

Although many studies have examined the direct relation between collectivistic orientation and depression and the relationship between acculturative stress and depression, we did not find any studies examining the relations among acculturative stress, collectivistic orientation, and depression. Given that acculturation researchers have theorized that acculturation may produce stress, and in turn, affect adaptation and mental health (Berry, 1997; Rudmin, 2009), we hypothesized that acculturative stress would serve as a mediator in the relationship between collectivistic orientation and depression: high collectivistic orientation would predict a lower level of acculturative stress and thereby a lower level of depression.

Cultural Self-Efficacy, Collectivistic Orientation, and Depression

A successful acculturation process in a new culture could be relevant to one's capability of adaptation. Cultural self-efficacy, the perception of capability to function effectively in a culturally diverse situation, has recently been proposed as an indicator of acculturation among migrants (Briones, Tabernero, Tramontano, Caprara, & Arenas, 2009). In line with Bandura's (1997) theory of domain-specific self-efficacy, cultural self-efficacy indicates whether migrants perceive themselves capable of adapting to the receiving culture (e.g., learn and understand the language) and maintaining values and identifications of the heritage culture (e.g., stay in touch with family and friends). A high level of cultural self-efficacy was associated with greater cultural contact and perception of cultural enrichment as well as higher general self-efficacy (Briones, et al., 2009).

The sense of efficacy to exercise control is associated with depression. (Bandura, 1993) proposed three routes through which self-efficacy results in depression and anxiety. When individuals cannot achieve the goals contingent to their self-worth, they would become depressed and anxious. The second route is due to a low sense of self-efficacy in social relationships. People who encounter difficulties in seeking out and cultivate social relationships may felt depressed. Third, a low sense of self-efficacy over ruminative thought also contributes to depressive episodes. Empirical research has confirmed a negative association between general self-efficacy and depression (Maciejewski, Prigerson, & Mazure, 2000; Muris, 2002; Paukert et al., 2010). Moreover, the negative effect of general self-efficacy on depression has been observed in both Western and Asian cultures (S. X. Chen, Chan, Bond, & Stewart, 2006). Cultural self-efficacy indicates a sense of efficacy to exercise control over cultural adaptation and is expected to reduce depressive symptoms.

To the best of our knowledge, no studies have investigated the relationship between collectivistic orientation and cultural self-efficacy. We suggest that cultural orientation may determine how one perceives his or her capability of cultural adaptation. In a group-oriented culture (e.g., China), people who tend to pursue group interests and goals may be more likely to adapt to a new environment. Individuals with a high collectivistic orientation should be easier to obtain a sense of efficacy to exercise control over cultural adaptation than those with a low collectivistic orientation. Therefore, cultural self-efficacy is expected to be positively predicted by collectivistic orientation.

Taken together, cultural self-efficacy is an efficient protective factor against depression during migration. Moreover, migrants may increase cultural self-efficacy by adhering to

collectivistic values. It is reasonable to assume that cultural self-efficacy may partly account for the mechanism that collectivistic orientation is beneficial from reducing depression. Hence, we expect that cultural self-efficacy functions as a mediator between collectivistic orientation and depression.

In summary, the purpose of the present study is to test the relationship between collectivistic orientation and depression and the mediating effects of acculturative stress and cultural self-efficacy in this association. We adopted a longitudinal design to assure that collectivistic orientation as a predictor precedes depression and mediators in time (Cole & Maxwell, 2003). Based on the existing literature, we hypothesized that collectivistic orientation predicts decreased depression, decreased acculturative stress, and increased cultural self-efficacy. We also hypothesized that acculturative stress and cultural self-efficacy mediate the relationship between collectivistic orientation and depression. Depression is expected to be positively predicted by acculturative stress, but negatively predicted by cultural self-efficacy.

Method

Participants

The data was derived from a larger intervention study focusing on reducing HIV-risk among young migrants in Beijing, China. Initially, the study recruited 660 migrants but 19 of them were excluded from the current analysis because they reported an age older than 30 years. Hence, a total of 641 migrants (376 males) were included in the present study. The mean age of participants was 24.11 (*SD* = 3.30). All participants indicated they have been in Beijing for at least 3 months without a permanent Beijing residence and were unmarried or if married, not living with spouse in Beijing. Participants were recruited from workplaces (store, shop, club, dance hall, bathhouse, barbershop, office, factory, construction site), migrant settlements, streets, and job markets, in 2011–2012 from an urban district which has the largest concentration of migrant population in Beijing. The Institutional Review Board of Wayne State University and Beijing Normal University reviewed and approved the study protocol.

All participants completed the baseline assessment, followed by a HIV-risk intervention program or a control condition. Two follow-up assessments were conducted at 6 and 12 months post-intervention. Of the participants in the baseline survey, 93.1% completed the 6-month follow-up assessment and 74.7% completed the 12-month follow-up assessment.

Measures

A comprehensive battery of questionnaires was administered at baseline and at each follow-up assessment. We derived the data of the current study from baseline and follow-up assessments.

Demographic information—At baseline, each migrant provided demographic information such as gender, age, ethnicity, marital status, and the number of years of living in Beijing.

Collectivistic orientation—At baseline, we used the Collectivistic Orientation subscale of the Cultural Orientation Scale (Chirkov, et al., 2003) to assess migrants' collectivistic orientation. The scale on collectivistic orientation includes 12 items: 6 items measure horizontal collectivism and other 6 items measure vertical collectivism. Participants responded to the items on a Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Mean scores were calculated, with higher scores indicating higher collectivistic orientation.

Acculturative stress—Acculturative stress was assessed in 6-month and 12-month follow-up sessions. An adapted version of the Acculturative Stress Scale (Wong & Song, 2008) was used to assess the migration stress. The acculturative scale contains 41 items which represent four dimensions of acculturative stress: financial and employment difficulties, cultural differences, lack of social life, and interpersonal tensions and conflicts. In addition, we added 13 self-developed items to assess the stress caused by dissatisfaction of intimate relationship and sexual life. Participants responded to the scale on a 4-point scale (1 = no stress; 4 = a great deal of stress).

Cultural self-efficacy—Cultural self-efficacy was assessed in 6-month and 12-month follow-up periods. We used an adapted version of the cultural self-efficacy scale for adolescents (Briones, et al., 2009). The original cultural self-efficacy scale for adolescents include 25 items to assess five aspects of self-efficacy in cultural adaptation: self-efficacy in mixing satisfactorily with other cultures, self-efficacy in understanding other ways of life, self-efficacy in coping with homesickness and separation, self-efficacy in processing information about other cultures, and self-efficacy in learning and understanding a foreign language. Given that the current sample is composed of migrants who moved within China and spoke the same language (Chinese) as local residents in Beijing, we removed five items from the original scale assessing differences in countries and languages. We adapted the remaining 20 items to measure self-efficacy in adaptation of Chinese rural migrants in urban cities. Participants responded to the scale on a 4-point scale (1 = completely incapable; 4 = completely capable).

Depression—Depressive level was measured in 6-month and 12-month follow-up visits using the Center for Epidemiologic Studies Depression Scale (CES-D scale; Radloff, 1977). Participants answered the items to indicate how often they have felt the way during the past week by using a 4-point scale as follows: 1 = rarely or none of the time (less than 1 day), 2 = some or a little of the time (1–2 days), 3 = occasionally or a moderate amount of time (3–4 days), and 4 = most of all of the time (5–7 days). Mean scores were calculated with higher scores representing higher depression.

All scales were presented in Chinese. The Cultural Orientation Scale, the Acculturative Stress Scale, and the Depression scale having been translated and validated in previous research (B. Chen, Vansteenkiste, Beyers, Soenens, & Van Petegem, 2013; Cheung & Bagley, 1998; Wong & Song, 2008). Regarding the Cultural Self-Efficacy Scale, a Chinese researcher fluent in English translated this scale into Chinese. The back translations were done by a researcher fluent in both Chinese and English. As shown in Table 1, all scales have good reliability.

Analytic strategy

Preliminary analyses were conducted using the SPSS statistical package. Factors for the acculturative stress scale and cultural self-efficacy scale were extracted based on the 6-month follow-up data. The items with loadings greater than .50 on a factor were retained to assess the factor. To exclude the potential effect of intervention programs on the longitudinal change in depression, acculturative stress, and cultural self-efficacy, we examined whether intervention and control group showed different change scores of the three constructs from 6-month to 12-month follow-ups. If there were significant differences, we would include intervention condition as a covariate in structural equation modeling.

To evaluate the longitudinal change of depression, acculturative stress, and cultural self-efficacy, we conducted structural equation modeling using change scores of these variables (MacKinnon, 2007). This approach can also provide sensitive tests of mediation effects in longitudinal data (Judd, Kenny, & McClelland, 2001). Changes in acculturative stress and cultural self-efficacy were calculated using simple change scores (12-month follow-up minus 6-month follow-up) of the extracted factors. Changes in depression were also indicated by a simple change score between two waves (12-month follow-up minus 6-month follow-up). The structural equation modeling was conducted using the Mplus 5.1 (Muthén & Muthén, 1998–2008). We examined the measurement model with the latent variables (i.e., collectivistic orientation, changes in acculturative stress, and changes in cultural self-efficacy). Modification indices were examined to identify possible improvements to the measurement model. In the structural model, we examined the model fit and tested direct effect of collectivistic orientation and indirect effects through acculturative stress and cultural self-efficacy on depression. The model fit was evaluated in terms of the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). CFI and TLI values close to or greater than .95, RMSEA values close to or less than .06, and SRMR values close to or less than .08 indicate adequate fit of a model to the observed data (Hu & Bentler, 1999).

Results

An exploratory factor analysis revealed a five-factor structure of the acculturative stress scale: financial difficulties (10 items), cultural differences (4 items), loneliness (4 items), interpersonal tensions (3 items), and dissatisfaction of close relationship (14 items). The five factors accounted for 68% of the total variance. Twenty-three items with loadings below .50 were excluded. In terms of the cultural self-efficacy scale, an exploratory factor analysis showed a three-factor structure: self-efficacy in processing information about urban cultures (4 items), self-efficacy in coping with homesickness and separation (4 items), and self-efficacy in understanding urban lifestyles and interacting with city residents (11 items). The three factors accounted for 72% of the total variance. One item with a loading below .50 was excluded. Table 1 shows means and standard deviations of depression and the factors of collectivistic orientation, acculturative stress, and cultural self-efficacy.

T-tests were performed to examine the effects of intervention program on depression, acculturative stress, and cultural self-efficacy. Changes in depression were higher in control

group than in intervention group ($p < .01$). Changes in interpersonal tensions were higher in control group than in intervention group ($p < .05$). In addition, changes in all three factors of cultural self-efficacy were higher in intervention group than in control group ($ps < .01$). To minimize the effect of intervention program, we included intervention condition as a covariate in the structural equation modeling.

The measurement model including collectivistic orientation, changes in acculturative stress, and changes in cultural self-efficacy indicated a good fit, $\chi^2 = 133.91$, $df = 32$, $p < .001$, $\chi^2/df = 4.19$, CFI = .98, TLI = .97, RMSEA = .08, SRMR = .03. All factor loadings were substantial and significant ($ps < .001$). The modification indices suggested that changes in acculturative stress were positively associated with changes in cultural self-efficacy ($p < .001$). Therefore, we included the correlational path between changes in acculturative stress and changes in cultural self-efficacy in the final model.

The structural model with standardized path coefficients is presented in Figure 1. The overall model fit was good, $\chi^2 = 156.47$, $df = 46$, $p < .001$, $\chi^2/df = 3.40$, CFI = .98, TLI = .98, RMSEA = .07, SRMR = .03. The model accounted for 85% of the variance of changes in depression, 48% of the variance of changes in acculturative stress, and 73% of the variance of changes in cultural self-efficacy. As expected, collectivistic orientation negatively predicted changes in depressive symptoms, suggesting that migrants with high collectivistic orientation showed decreased depression. Moreover, collectivistic orientation negatively predicted changes in acculturative stress, which is also consistent with our hypothesis, indicating that migrants with high collectivistic orientation experienced less stress during the adaptation to the local culture. More important, in line with our expectation, acculturative stress mediated the effect of collectivistic orientation on changes in depression ($\beta = -.08$, $p < .001$). This result indicates that for the migrants who focused on communal goals and cared about family and friends, they had experienced less stress during migration and in turn had less chances of becoming depressed.

Surprisingly, we observed a negative prediction of collectivistic orientation on changes in cultural self-efficacy and a positive association between changes in cultural self-efficacy and changes in depression. Although these results are in opposite to our predictions, we did find a significant mediating effect of cultural self-efficacy in the relationship between collectivistic orientation and depression ($\beta = -.30$, $p < .001$).

Discussion

The main purpose of the present study was to examine the relationship between collectivistic orientation and depression and the mediating effects of acculturative stress and cultural self-efficacy in this relationship. We first expected collectivistic orientation to be associated with decreased depression. The results supported this hypothesis, even after controlling for the mediating effects of acculturative stress and cultural self-efficacy. This finding is consistent with previous findings showing that collectivism was negatively associated with depression in Russian adolescents (Moscardino, et al., 2010), but inconsistent with previous results showing a positive correlation between collectivism and depression in migrants in American cultures (Harris & Molock, 2000; Okazaki, 1997, 2000). These contrasting findings between

cultures highlight the importance of cultural factors in reducing depression. According to terror management theory (Simon, Arndt, Greenberg, Pyszczynski, & Solomon, 1998; Simon, et al., 1996; Solomon, Greenberg, & Pyszczynski, 2004), cultural worldviews buffer against anxiety, and if individuals have more tenuous faith in cultural worldviews, they are more likely to be depressed. Collectivistic worldviews are embraced in Asian countries, whereas individualist worldviews are advocated in Western cultures. Therefore, the contrasting findings between cultures may reflect a person-culture match effect (Fulmer, et al., 2010): collectivists in collectivistic cultures and individualists in individualistic cultures are less likely to be depressed.

Second, we expected acculturative stress to be negatively associated with collectivistic orientation, but positively associated with depression. Meanwhile, acculturative stress would mediate the relationship between collectivistic orientation and depression. Our findings supported the hypotheses. The positive association between acculturative stress and depression was consistent with findings of previous studies among Asian Americans (Constantine, et al., 2004; Wei, et al., 2007). Taken together with previous literature, our finding suggests that the negative effect of acculturative stress on depressive symptoms exist not only among international immigrants, but also among internal migrants. In line with our expectation, collectivistic orientation was associated with decreased acculturative stress. More important, acculturative stress served as a mediator between collectivistic orientation and depression. These findings are consistent with the person-culture match effect. When Chinese internal migrants had a collectivistic orientation that is encouraged in the Chinese culture, they may show better acculturation, perceive less discrimination, seek for more support from family and friends, and obtain more resources to cope with difficulties in adaptation. Therefore, people high in collectivistic orientation may experience less acculturative stress and thereby less vulnerable to depression.

Third, cultural self-efficacy was revealed as a mediator in the relationship between collectivistic orientation and depression; however, we surprisingly found that cultural self-efficacy was negatively associated with collectivistic orientation and was positively associated with depression, which suggests that cultural self-efficacy may be a negative factor in adaptation among Chinese internal migrants. This assumption was also corroborated by the finding of a positive correlation between cultural self-efficacy and acculturative stress, which has also been found in previous research in Spanish adolescents (Briones, et al., 2009).

We suspect that the findings for cultural self-efficacy may be related to the conceptualization and measure of self-efficacy used in the current study. Acculturation involves not only the adaptation in the receiving culture but also the maintenance of the heritage culture (Berry, 1997; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). However, the cultural self-efficacy scale we used mainly assesses self-efficacy of adaptation in the receiving culture (Briones, et al., 2009). A high level of self-efficacy in adapting to a new environment does not indicate a high level of self-efficacy in preserving values and managing relationships with family and friends in the original culture. Therefore, the findings of cultural self-efficacy in the current study may only indicate the relationships of the adaptation in the receiving culture with other variables. In addition, East Asians tend to

be more self-criticizing (Heine, Lehman, Markus, & Kitayama, 1999) and consider a high level of self-efficacy and self-competence as a barrier to build social relationships (Tafarodi, Lang, & Smith, 1999). Therefore, among East Asians, it is possible that the more collectivistic individuals are, the lower cultural self-efficacy they perceive. Moreover, if East Asians perceive self-efficacy as a factor that may lead to negative feedback from others, a high level of cultural self-efficacy should be connected with poor psychological well-being such as depression and anxiety.

The findings in the current study have a number of limitations. The participants in the present study were migrants who were unmarried or if married, not living with their spouse. They were more likely to lack social support and experience loneliness, stress, and depression compared with migrants living with their partners. Also, the participants were young migrants aged from 15 to 30 years. The results may not be applicable to old migrant groups not represented in this study. In addition, this study's sample was recruited from an urban district in Beijing. Although this district has the largest concentration of migrant population in Beijing, the sample may still be biased because demographic backgrounds and employment status of migrants in this district may be different from migrants in other districts in Beijing or migrants in other cities in China. Finally, the sample in this study received either a HIV-risk reduction program or a career planning program. The programs may have improved psychological well-being of the sample.

The current findings suggest several exciting future research directions. First, since collectivistic orientation has predicted decreased acculturative stress and depression, future researchers might consider assessing cultural orientation for their studies to determine the influence of cultural values on acculturative stress and depression among migrants. Second, future studies might compare the associations of collectivistic orientation with different dimensions of cultural self-efficacy. In East Asian cultures, collectivism is emphasized in the relationship with significant others (i.e., family and best friends) rather than with general social groups (e.g., coworkers, classmates) (Brewer & Chen, 2007; Du, et al., 2013; Du, et al., 2012). Relative to cultural self-efficacy of the adaptation in the receiving culture, cultural self-efficacy of the maintenance of the heritage culture may demonstrate a different relationship with collectivistic orientation. Third, future research may use cross-cultural design to examine how the differences in cultural values lead to different levels of acculturative stress and the subsequent depression as various ethnic groups have distinct cultural values or orientations (Oyserman, et al., 2002). Finally, international migrants may experience the conflicting cultural beliefs (e.g., collectivistic vs. individualistic orientation) in a new culture. Future studies need to explore the mechanism of cultural orientation in affecting mental health among international migrants.

In terms of clinical implications, the current research suggests the important roles played by cultural orientation on Chinese internal migrants' mental health. Hence, collectivistic orientation can be incorporated in counseling work with internal migrants in China or other Asian cultures. In addition, if the person-culture match effect on mental health is confirmed by future studies in individualistic cultures (e.g., to be individualistic will improve psychological well-being among individualists), our findings have clinical implications for

working with international migrants who hold a collectivistic orientation but move to an individualistic culture.

Acknowledgements

This study was supported by NIH Research Grant 1R01NR010498-01 by the National Institute of Nursing Research.

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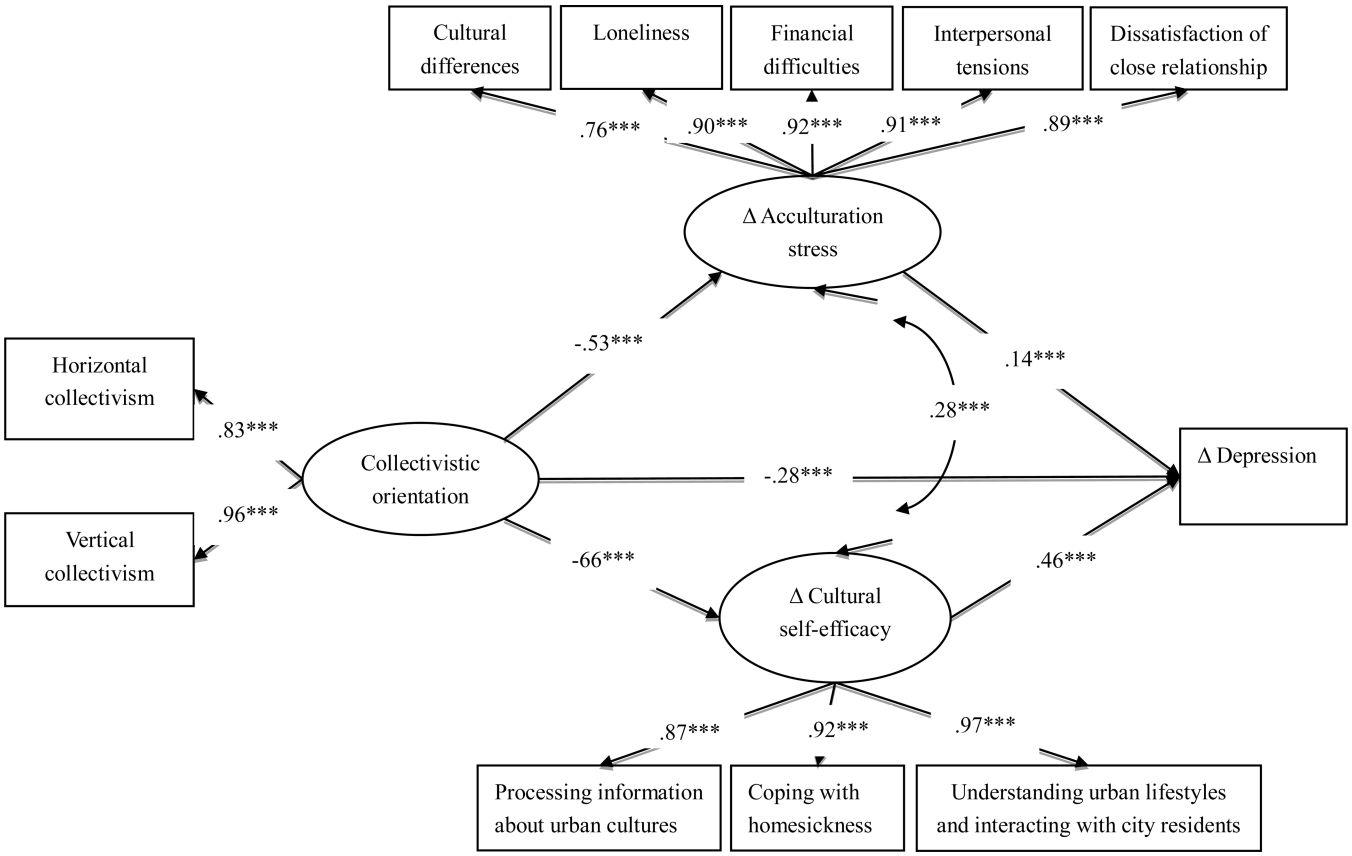

Figure 1.

Results of structural equation model. Standardized path coefficients are shown. *** $p < .001$.

Table 1

Descriptive data on the measures of collectivistic orientation, acculturative stress, cultural self-efficacy, and depression

	Baseline			6-month follow-up			12-month follow-up		
Variable	***Mean***	***SD***	**α**	***Mean***	***SD***	**α**	***Mean***	***SD***	**α**
Collectivistic orientation									
Horizontal collectivistic orientation	3.64	0.71	.87						
Vertical collectivistic orientation	3.54	0.70	.84						
Acculturative stress									
Cultural differences				1.88	0.74	.85	1.87	0.66	.83
Loneliness				1.88	0.71	.87	1.87	0.65	.86
Financial difficulties				2.08	0.73	94	2.04	0.65	.93
Interpersonal tensions				1.78	0.68	.81	1.86	0.65	.77
Dissatisfaction of close relationship				1.86	0.67	.97	1.85	0.61	.96
Cultural self-efficacy									
Processing information about urban cultures				2.83	0.50	.89	2.80	0.51	.89
Coping with homesickness				2.75	0.59	.94	2.73	0.56	.93
Understanding urban lifestyles and interacting with city residents				2.88	0.48	.95	2.89	0.45	.94
Depression				1.63	0.34	.85	1.69	0.40	.85